

Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) An optical scanner comprising:

a mirror fixed to a rotating shaft;

feedback control means for controlling a detected angle of said mirror so that said angle coincides with a desired value; and

corrected target trajectory generating means for correcting a target trajectory so as to cancel a gain characteristic and a phase characteristic of said feedback control means with respect to a specific frequency;

wherein an output signal of said corrected target trajectory generating means is supplied to said feedback control means as said desired value.

2. (Currently Amended) ~~An optical scanner according to Claim 1,~~
~~further comprising:-~~ An optical scanner comprising:

a mirror fixed to a rotating shaft;

feedback control means for controlling a detected angle of said mirror so that said angle coincides with a desired value;

corrected target trajectory generating means for correcting a target trajectory so as to cancel a gain characteristic and a phase characteristic of said feedback control means with respect to a specific frequency, wherein an output signal of said corrected target trajectory generating means is supplied to said feedback control means as said desired value; and

frequency characteristic estimating means for estimating a gain characteristic and a phase characteristic of said feedback control means;

wherein said gain characteristic and said phase characteristic of said feedback control means with respect to said specific frequency are estimated by said frequency characteristic estimating means.

3. (Original) An optical scanner according to Claim 2, wherein said desired value corresponds to a periodical target trajectory made from a superposition of sine waves of one or plural frequencies, while a gain characteristic and a phase characteristic of each frequency constituting said target trajectory are estimated by said frequency characteristic estimating means, and said periodical target trajectory is corrected to cancel said gain characteristic and said phase characteristic.

4. (Original) An optical scanner according to any one of Claims 1 to 3, wherein said corrected target trajectory generating means is inverse characteristic filter means for performing a filter operation having inverse characteristics of said gain characteristic and said phase characteristic estimated by said frequency characteristic estimating means.

5. (Currently Amended) A laser machining apparatus comprising:

the optical scanners scanner according to ~~any one of Claims 1 to 4~~
Claim 1;

wherein a two-dimensional trajectory of a laser beam is drawn in a surface of a work to be machined, so that said work is machined two-dimensionally by said laser beam.

6. (Original) The laser machining apparatus according to Claim 5, further comprising:

control means for suspending irradiation of said work with said laser beam during a transient state where said target trajectory has a temporary sudden change.

7. (New) A laser machining apparatus comprising:

the optical scanner according to Claim 2;

wherein a two-dimensional trajectory of a laser beam is drawn in a surface of a work to be machined, so that said work is machined two-dimensionally by said laser beam.

8. (New) The laser machining apparatus according to Claim 7, further comprising:

control means for suspending irradiation of said work with said laser beam during a transient state where said target trajectory has a temporary sudden change.

9. (New) A laser machining apparatus comprising:

the optical scanner according to Claim 3;

wherein a two-dimensional trajectory of a laser beam is drawn in a surface of a work to be machined, so that said work is machined two-dimensionally by said laser beam.

10. (New) The laser machining apparatus according to Claim 9, further comprising:

control means for suspending irradiation of said work with said laser beam during a transient state where said target trajectory has a temporary sudden change.

11. (New) A laser machining apparatus comprising:

the optical scanner according to Claim 4;

wherein a two-dimensional trajectory of a laser beam is drawn in a surface of a work to be machined, so that said work is machined two-dimensionally by said laser beam.

12. (New) The laser machining apparatus according to Claim 11, further comprising:

control means for suspending irradiation of said work with said laser beam during a transient state where said target trajectory has a temporary sudden change.